Lafayette Water System #0000373

1. System Management and Operation	Points (94)	Treatment and/or Distribution
A. Record Keeping		Drinking Water Regulations require all public water systems to generate and maintain certain records for various lengths of time. The Sanitary Survey process will address all of the records which water systems must retain.
Polymer Report	N/A narrative	Consult 0400 -45-01-.17(31). Failure to submit to DWS and/or retain record(s).
Sanitary Surveys/ Division Correspondence	Ok narrative	Consult 0400-45-01-.20(1). Failure to retain records.
New Tap Records	Ok narrative	Consult 0400-45-01-.17(32). Failure to create and/or retain records.
Bacteriological sample analyses and/or summary forms	OK narrative	Consult 0400-45-01-.20(1). Failure to submit to DWS and/or retain record(s).
Bacteriological Sampling Site Plan	Ok narrative	Consult 0400-45-01-.07(1). Failure to establish and/or retain Plan.
Turbidity Records and Forms	Ok narrative	Consult 0400-45-01-.20(1). Failure to identify and/or retain records.
Chemical Analysis	OK narrative	Consult 0400-45-01-.20(1). Failure to retain records.
Lead and Copper Records	OK narrative	Consult 0400-45-01-.20(1). Failure to retain records.
Cross Connection Plans and Records	Ok narrative	Consult 0400-45-01-.17(6), .20(1). Failure to retain records.
MORs and Daily worksheets	Ok narrative	Consult 0400-45-01-.20(1). Failure to retain records.
Complaint Logs and records	OK narrative	Consult 0400-45-01-.17(24), .20(1). Failure to create and/or retain records.
Public notice, Special Notice, CCR and Public Education	OK narrative	Consult 0400-45-01-.20(1), .40(a)7. Failure to retain records.
Distribution Map	OK narrative	Consult 0400-45-01-.17(15). Failure to retain adequate map(s) of system.
Flushing Plan and Records	OK narrative	Consult 0400-45-01-.17(10). Failure to create and/or retain records.
Storage Tank Inspections and Maintenance Records	narrative	High School has rusty spots, paint is chalky. Consult 0400-45-01-.17(33). Failure to retain records.

Facility Maintenance Records	OK narrative	Consult 0400-45-01-.20(1). Failure to create and/or retain records.
Equipment Maintenance and repair records	OK narrative	Consult 0400-45-01-.17(17), .20(1). Failure to create and/or retain records.
Actions to correct violations	OK narrative	Consult 0400-45-01-.20(1). Failure to create and/or retain records.
Variance and Exemption records	OK narrative	Consult 0400-45-01-.20(1). Failure to retain records.
Emergency Operations Plan	OK narrative	Consult 0400-45-01-.17(7). Failure to establish and/or retain Plan.
Submission of Plans and Specifications	OK narrative	Consult T.C.A. 68-221-706, 0400-45-01-.05. Failure to submit to DWS and/or retain record(s).
Monitoring Plans and Schedules	OK narrative	Consult 0400-45-01-.20(1), .12(1)and (5), .17(3), .33(7) and (8), .36(6), .37(2), .39(2) and (3). Failure to retain records.
Wellhead Protection Plan/ Source Water Assessment	OK narrative	Consult 0400-45-01-.04, .17, .34. Failure to retain records
Turbidity Calibration / Verification Records	OK narrative	Consult 0400-45-01-.05(11), .31(5), .17(40), .17(41), policy. Failure to create and/or retain records.
Backwash recycling records	N/A narrative	Consult 0400-45-01-.31(9). Failure to create and/or retain records.
Capacity Development Plan	OK narrative	Consult 0400-45-01-.17(37),(38). Failure to produce Plan if required and/or retain records.
Business Plan	N/A narrative	Consult 0400-45-01-.04(5), .17(37),(38). Failure to produce Plan if required and/or retain records.
Standard Operating Procedures	OK narrative	Consult 0400-49-01-.04, DWS Guidance. Failure to establish and/or retain records if required.
Records Organization	OK narrative	Consult 0400-45-01-.20(1). Failure to maintain records in an organized fashion.
Corrective Actions	OK narrative	Consult 0400-45-01-.40. Failure to maintain records of corrective actions.
B. Construction Projects	N/A Rating	Consult T.C.A. 68-221-706, Rule 0400-45-01-.05, .17(19). No new construction or modification may be made without approval of the Division. All projects must be constructed in accordance with approved plans and specifications. All new or modified treatment facilities must be inspected prior and approved prior to being placed into service.
*	5	Constructs project(s) without obtaining approval from the Department.
	3	Water System makes unapproved change in an approved water treatment or distribution system project.

	3	Water system fails to notify DWS prior to new or modified plant start-up.
	1	Water system fails to maintain a set of approved construction plans/specifications at or near job site.
	narrative	Water system fails to notify DWS prior to construction.
C. Submission of Monthly Operations Reports	OK	Consult Rule 0400-45-01-.17(2). Each CWS and NTNCWS must submit a Monthly Operation Report (MOR), together will associated forms/reports, which contains all required information and accurately reveals the operation and performance of the water system during the reporting period. All MORs must be received in the appropriate Field Office by the 10th of the following month.
	narrative	Late reports, non submittal of reports, completion of reports.
D. Reporting Requirements	OK	Consult Rules 0400-45-01-.18, .39(24), .40. All public water systems shall report to the Division of Water Supply of the failure to comply with drinking water regulations, situations that affect the quality or quantity of water or which do or may present a substantial endangerment to health. Recording, reporting or providing inaccurate or false data or statements to the State is prohibited.
	4	Failure to report any major breakdown or failure of equipment in the water treatment process which affects the quality or quantity of water leaving the water treatment plant.
	4	Failure to report any serious loss of water service due to a failure of transmission or distribution facilities, including breaks exceeding 24 hours to repair.
	4	Failure to report any situation with the water system which presents or may present an imminent and substantial endangerment to health, i.e. fecal, nitrate, primary chemical or turbidity MCL, an identified cross connection, etc. Failure to respond to significant deficiencies or meet Department-specified requirements.
*	30	Recording and/or reporting any data or information which is inaccurate, misleading, false or information known or that should be known to be false.
	6	Reporting any data or information that is inaccurate, misleading or false because the person reporting has not used reasonable care, judgment or application of knowledge in the preparation of such data.
	4	Providing inaccurate or false statements to the State.
E. Public Notification	OK	Consult Rule 0400-45-01-.19. All water systems which fail to meet a primary drinking water standard, fail to monitor a primary drinking water contaminant or fail to apply or comply with a required treatment technique must notify the affected system customers. Public water systems must also provide public notice for any situation which may present an imminent and substantial endangerment to health.
	10	Failure to provide Tier 1 public notification as required.
	3	Failure to provide Tier 2 public notification as required.
	narrative	Failure to provide Tier 3 public notification as required.
	narrative	Failure of public notice to provide/contain mandatory language.
	narrative	Failure to provide public notice timely.

	narrative	Failure to provide notification and/or certification to DWS.
F. Facility Maintenance Fee	OK	Consult Rule 0400-45-01-.32. All public water systems are required to pay an annual facility maintenance fee according to the schedule prescribed by rule.
	narrative	Non-payment or late payment of applicable facility maintenance fee.
G. Enforcement	OK	T.C.A. 68-221-701 et seq. Any water system which has been directed by the Department must fulfill the requirements or compliance schedules resulting form a Commissioner's Order, Director's Order, Agreed Order, Final Agreed Order, Judgment or Decree. Any requirements set forth in any executed Letter of Agreement or Notice of Non-Compliance must be fulfilled.
	10	Failure to comply with schedules of a Commissioner's Order , Director's Order or Agreed Order.
*	4	Failure to comply with Letter of Agreement
	narrative	Failure to comply with requirements and/or time schedules of a Notice of Violation or Notice of Non-Compliance.
H. Emergency Operations Plan	OK	Consult Rules 0400-45-01-.17(7), .34(4). All community water systems must have an approved Emergency Operations Plan (EOP) to safeguard the water supply and notify the public of unsafe drinking water.
	3	Failure to adhere to the E.O.P. during system emergency or actual or potential contamination of the system
2. Operator Compliance	**(23)**	**Treatment and/or Distribution**
A. Certified Operator	OK	Consult T.C.A. 68-221-901 et seq., 0400-49-01 and DWS Guidance. All water treatment facilities and/or distribution systems must have a person in direct charge, properly certified under the Water Environmental Health Act, and whose decisions and directions control the manipulation of equipment and thereby determine the quality and quantity of water supplied. Systems which lose their Certified Operator in direct charge are required to obtain a properly certified operator within 30 days unless otherwise directed by the Board.
*	15	Failure to meet both treatment and distribution certification requirements.
*	7	Failure to meet either treatment or distribution certification requirements.
	3	Failure to demonstrate availability considering system size, complexity and source water quality.
	5	If there has been an occasion when the treatment plant has been left unattended when attendance is required.
	narrative	Operator in direct charge has not been designated and on record with the Certification Board.
	narrative	Failure to notify DWS of the loss of a Certified Operator in direct charge.
	narrative	If prepared SOP documents do not delineate the responsibilities or water system personnel or other minor issues exist.
3. Source	**(25)**	**Treatment**

A. Source Adequacy	OK	Consult 0400-45-01-.05, .16, .34(3). Impounded surface supplies must have a minimum of 30 days supply. Streams and rivers must have enough water at the 3 day - 20 year low-flow to meet the maximum demand. The 3 day - 20 year low-flow of a spring must be able to meet maximum demand. The maximum safe yield of a well or well field must be able to meet demand. Source and facilities should be relatively free of major upstream discharges, flooding, etc. Water quality characteristics must be evaluated for new sources and sites prior to placing them into service.
	5	Unapproved source.
	3	Periodic adequacy problems.
	4	Failure to evaluate ground water source for GWUDI or failure to provide treatment.
B. Intake	OK	Consult 1200-5-1-.05, .17. Surface water intake structures must be well maintained and include screens at water level, ventilation and must be secure.
	2	Failure to properly maintain surface water intake structures.
	2	Failure to provide security measures.
C. Wellhead / Springbox Construction	OK	Consult 0400-45-01-.05, .16, .34, .17. Wells and springs must be protected against surface contamination. Well casing must extend above ground 6 inches or above the 100 year flood level and annular space must be properly backfilled. Spring boxes must be properly constructed and sealed. Vents on wells and springs must be screened.
	2	Failure to protect wells or springs from surface contamination.
	2	Failure to observe the proper siting requirements
	2	Failure to protect wells or springs from surface water drainage.
D. Source Protection Plans	OK	Consult Rule 0400-45-01-.34. Public water systems using a ground source must complete a Wellhead Protection Plan. Public water systems using a surface source must complete, and update annually, a contaminant source inventory and source water protection plan.
	2	Failure to complete a Wellhead Protection Plan or Source Water Protection Plan.
	1	Failure to up-date Wellhead Protection or Source Water Protection Plan as required.
4. Treatment	**(153)**	**Treatment**
A. Aerator	N/A	Consult 0400-45-01-.05, .17. Aerators must be functional and well maintained. Aerators must not be overloaded, unscreened or unprotected. Media must be maintained. Aerators must be designed to control the amount of aeration needed.
	2	Aerators are overloaded or is shown not to remove CO2 to less than 20ppm.
	2	Aerators are not maintained.
B. Chemicals/ Chemical Feeders	OK	Consult 0400-45-01-.05, .17, .36. All facilities must have sufficient chemical feeders to properly treat water. Backup feeders must be available to maintain all steps in the treatment process except fluoridation. Feeders must be properly maintained and properly sized. NSF or ANSI approved chemicals and lubricants must be used.
	2	Failure to provide sufficient number of chemical feeders.
	2	Chemical feeder(s) in need of repair or improperly sized.

	2	Chemicals fed are not NSF or ANSI approved.
	2	Failure to provide/feed appropriate chemicals as necessary or directed by DWS.
C. Mixing	OK	Consult 0400-45-01-.05, .17. All systems which add chemicals must insure that proper mixing takes place through mechanical mixers, static in-line mixers or turbulence. Baffling systems must prevent short circuiting.
	2	Sizing or any component of the mixing process is inadequate.
D. Flocculation	OK	Consult 0400-45-01-.05, .17. Flocculation basins must be maintained and mechanical flocculators must be in working order. Flocculation basins must provide a minimum of 30 minutes detention time and must not allow short circuiting.
	2	System is inadequately sized.
	2	System is not operational or deterioration causes water treatment problems.
E. Sedimentation	OK	Consult 0400-45-01-.05, .17 and Design Criteria. Sedimentation basins must be properly sized and provide adequate detention time. Sludge accumulation must not impair turbidity removal. Tube settlers must not be allowed to coat over with sediment and/or algae. Up-flow clarifiers must have minimum detention time of 1 hour and a flow rate not to exceed 1.0 gpm/ft2. Basins must be equipped with a functional drain and overflow. Weirs must be level to provide even flow.
	2	Basins are inadequately sized or basin short circuiting occurring.
	2	Drains and/or overflows inoperable or inadequately sized.
	2	Sludge removal and/or sludge removal equipment is inadequate.
	2	Mechanical equipment improperly maintained.
F. Filtration / Alternative Technology		Consult 0400-45-01-.05, .17, .31, .39. Filtration treatment must be provided where required. Filter beds must conform to specifications as set forth by rule. Membrane filtration must undergo challenge testing to demonstrate removal efficiency. Rate of filtration must not exceed that approved by the Division. Loss of head gauges, rate of flow controllers and other equipment must be maintained and operable.
	2	Process or equipment is improperly sized , filter bed specifications are not met or challenge testing to demonstrate removal efficiency is not performed.
	2	Exceedance of rate of filtration flow approved by the DWS.
*	30	Failure to filter and/or provide filtration treatment as required.
	2	Loss of head gauges, rate of flow controllers and other equipment is inoperable or not maintained in good working order. Loss of head guages are not installed.
G. Rewash / Filter to Waste	OK	Consult 0400-45-01-.17. All subpart H systems must have rewash or filter-to-waste capability. Rewash or filter-to-waste procedures shall be conducted in a manner to prevent the introduction of contaminants into the clear well. As an alternative, systems excluded from the rewash requirement must demonstrate that their backwash cycle is conducted in a manner to prevent the introduction of contaminants into the clear well or distribution system.
	2	Filter to waste is not provided or is not sufficient to prevent contaminants from entering the clear well.

H. Turbidimeters / Calibration	OK	Consult 0400-45-01-.05, .17, .31, .39. Turbidity monitoring and recording equipment must be available and operational where required. Alarm and/or automatic shut off capability must be provided on all unmanned facilities where required. All turbidimeters used for compliance purposes must be calibrated no less often than 90 days and pursuant to manufacturers recommendations. Comparisons of primary and secondary standards are mandatory. Check samples for verification of calibration must be performed as required.
	4	Turbidimeters are not available where required.
	3	Alarm or automatic shut off capability not provided.
	2	Calibration not performed according to manufacturers specifications or every 90 days.
	2	Turbidimeter(s) out of service for more than 5 days.
	2	Failure to perform verification of turbidimeters and/or re-calibrate as required.
		Lebtronix
I. Disinfection/ Calibration	OK	Consult 0400-45-01-.14(10), .17, .31, .36, .40. Disinfection treatment must be provided where required. Duplicate disinfection equipment must be provided, operational and utilized. Ground water systems must correct significant deficiencies as prescribed in Rule 1200-5-1-.40.
*	30	Failure to disinfect and/or provide disinfection equipment where required.
	4	Disinfection equipment is not operational. Failure by a ground water system to correct significant deficiencies as required.
	3	Duplicate disinfection equipment is not available or not utilized.
	2	Failure to perform instrument calibration as required, insufficient equipment, scales, etc.
J. Disinfection Contact Time	OK	Consult 0400-45-01-.17, .31, .40. All water systems that disinfect must provide adequate contact time before the first customer. Ground water systems must provide 4-log treatment of viruses before or at the first customer. Surface water and GWUDI systems must obtain an inactivation ratio of 1.0 before the first customer.
	4	Failure to provide adequate contact time or maintain an inactivation ratio of 1.0 or greater. Failure by a ground water system to provide 4-log treatment of viruses at the first customer.
	2	Treatment Plant and/or Clear well configuration and volume fails to provide adequate contact time for full plant capacity.
K. Master Meter	OK	Consult 0400-45-01-.17. Water systems which are prescribed a laboratory monitoring schedule must have master meter(s) to measure raw and finished water. The meter(s) must be operable and maintained to facilitate correct chemical dosages relative to the amount of water treated.
	2	Meter is not available or is inoperable.
	1	Meter is not accurate.
L. Maintenance of Equipment, Buildings and Grounds		Consult 0400-45-01-.17. All equipment used in the treatment process must be maintained and operable. All buildings, clear wells, grounds must be maintained and secured. Adequate lighting, ventilation, drains, dehumidifiers, toilet facilities, heaters, air conditions, etc. must be provided. No storage of hazardous chemicals or other materials not used in the treatment process must be permitted.
	1	Maintenance is required and/or security is inadequate. Clearwell needs repairing and painting to prevent further damage.
	narrative	Minor maintenance issues.

M. Laboratory Facilities	OK	Consult 0400-45-01-.17(3). Treatment plants must have all chemical, physical, and bacteriological equipment necessary to monitor and control the operation of the facility as required based on the DWMP. The equipment must be maintained and operable.
	3	Failure to provide laboratory where one is needed.
	2	Failure to provide proper lab equipment, equipment is not operational or lab is not of adequate size.
	1	Failure to provide adequate environmental controls.
N. Safety	OK	Design Criteria Parts 5.2-5.4. All needed protective equipment must be available. Chlorine cylinders must be secured and chlorine rooms must have operable exhaust fans. Chlorinators must be vented to the outside with screens on vent lines. Incompatible compounds must not be stored together.
	2	Lack of needed protective equipment.
	2	Failure to provide adequate and operable exhaust equipment for chlorine rooms.
	2	Failure to provide adequate chlorinator vent lines and/or screens.
	2	Incompatible compounds stored together.
O. Sludge Handling / Backwash Handling	OK	Consult 0400-45-01-.05. Treatment facilities with sedimentation and/or filtration must have adequate sludge handling/ back wash handling capabilities. Sludge and back wash handling facilities must be sized to allow proper operation of the plant. Discharges of treated or untreated water to a stream must have a National Pollution Discharge Elimination System (NPDES) permit. Discharges to a well or depression must have an Underground Injection Control (UIC) permit.
	2	Inadequately sized sludge units, inoperable equipment or lack of maintenance.
P. Sanitary Conditions	OK	Consult 0400-45-01-.17. Unsanitary conditions, with potential for adverse affects on water quality, must not be permitted including during construction activities. There must be no evidence of pets, pests or refuse.
	2	Poor or unsanitary conditions with potential to impact water quality including, pets, pests, refuse, construction or general housekeeping.
Q. Fluoridation Techniques	N/A	Consult 0400-45-01-.06, .12, .17. Systems which fluoridate must use proper methods and procedures. Equipment must be maintained. Sampling must be performed.
	2	Improper dosing, failure to maintain equipment or failure to conduct sampling.
R. Design Capacity	OK	Consult 0400-45-01-.05, .17, .31. Components of the water system must meet the design standards imposed by the SDWA Rules. Average daily water use must not exceed the design capacity of the treatment plant.
	4	Exceedance of design capacity
	2	System has exceeded 85% of design capacity and has failed to initiate actions for expansion.
S. Filter Backwash Recycling	N/A	Consult 0400-45-01-.31(9). All subpart H systems with conventional or direct filtration that recycle back wash water, thickener supernatant, or liquids from dewatering processes must provide a schematic showing the origin of all flows which are recycled and a typical recycle flow.

	1	Failure to provide a plant schematic on origin of flows and typical recycle flow data or failure to maintain recycle flow information as specified in 0400-45-01-.31(9)(d).
5. Monitoring and Data Verification	**(175)**	**Treatment and/or Distribution**
A. Laboratory Process Monitoring	OK	Consult 0400-45-01-.17(3). All water treatment facilities must monitor the water treatment process in accordance with the monitoring program established by the Division. Tests must be performed according to established procedures. Data must be reviewed and compared to validate reported information.
	2	Failure to monitor established parameters.
	2	Failure to perform tests according to established procedures.
B. Bacteriological Monitoring	OK	Consult 0400-45-01-.07, .40. All public water systems must perform bacteriological monitoring according to population served and at a frequency prescribed by regulation. Water systems must meet all routine, elevated routine and/or repeat monitoring requirements. Samples must be collected from valid / representative distribution locations according to a sampling site plan. Ground water systems must conduct source water monitoring in accordance with Rule 0400-45-01-.40.
	6	Failure to submit any valid samples during more than 1 monitoring period.
	3	Failure to submit any valid samples during 1 monitoring period.
	2	Failure to submit all required samples during a monitoring period. Failure to collect representative samples or in accordance to the sampling site plan. Failure by a ground water system to conduct assessment source water monitoring as required.
	3	Failure to conduct repeat monitoring as required for 1 monitoring period. Failure by a ground water system to conduct triggered source water monitoring as required.
	6	Failure to conduct repeat monitoring as required for more than 1 monitoring period.
C. Bacteriological Compliance	OK	Consult 0400-45-01-.06. Systems collecting fewer than 40 routine samples per sampling period may have no more than 1 positive sample. Systems collecting more than 40 samples per sampling period may have no more than 5% samples positive. Fecal or E coli. positive repeat samples or fecal or E coli. positive routine samples followed by total coliform positive repeats samples constitutes an Acute Violation of the MCL.
	4	Bacteriological non-acute MCL violation.
	7	Bacteriological acute MCL violation

D. Turbidity Monitoring	OK	Consult 0400-45-01-.08, .17(26), .31, .39. All systems required to monitor turbidity must monitor continuously unless otherwise approved by the Division. Systems which employ filtration treatment must monitor individual filter effluent turbidity and combined filter effluent turbidity and record results. For any individual filter that has measured turbidity greater than 1.0 NTU or 0.5 NTU in two consecutive measurements taken 15 minutes apart pursuant to regulation, the system must report the exceedance and must produce a filter profile or identify the obvious reason for the abnormal performance. For any individual filter that has measured turbidity greater than 2.0 NTU in two consecutive measurements taken 15 minutes apart at any time in 2 consecutive months, the system must report the exceedance and arrange to conduct a comprehensive performance evaluation by the State or party approved by the State. All membrane filtration facilities must provide daily direct integrity testing and continuous indirect integrity testing unless otherwise approved by the State.
	3	Failure to monitor and/or record as required.
	3	Failure to maintain continuous monitoring/recording for each individual filter and/or combined filter effluent or conduct grab sampling as required.
	3	Failure to conduct filter profile(s).
	2	Failure to complete and/or submit filter exceedance report(s).
	3	Failure to perform comprehensive performance evaluation (CPE) as required.
	3	Failure to perform direct integrity testing daily (membrane filtration).
	3	Failure to provide indirect integrity testing (membrane filtration).
	narrative	Failure to properly label turbidity records.
E. Turbidity Compliance	OK	Consult 0400-45-01-.06, .31. True ground water systems directed to monitor turbidity must comply with the MCL for turbidity. GWUDI systems that have qualified to avoid filtration treatment must comply with treatment technique requirements. Subpart H water systems must comply with treatment technique requirements.
	4	Exceedance of MCL for turbidity.
	4	Turbidity treatment technique violation - 95% < 0.3 NTU
	7	Turbidity treatment technique violation - single exceedance
F. Continuous Chlorine Residual Monitoring	OK	Consult 0400-45-01-.17(4), .31, .36, .40. Subpart H systems and ground water systems serving more than 3,300 individuals must monitor continuously and report the lowest value each day that water is served. Subpart H systems and ground water systems serving less than 3,300 individuals must monitor at a frequency prescribed by regulation and report the lowest value each day water is served.
	3	Failure to monitor and/or record chlorine as required.
	2	Equipment inoperable or not returned to service within 5 days for subpart H systems or within 14 days for ground water systems.
G. Primary Chemicals Monitoring	OK	Consult 0400-45-01-.09, .10, .11, .24, .25, .26, .36, .37, .38. All public water systems must monitor primary chemicals in accordance with regulations. Confirmation samples must be collected as specified by regulation.
	3	Failure to monitor (any parameter)
	3	Failure to meet confirmation sampling or repeat sampling if required.
	2	Failure to collect sample(s) from acceptable locations.
	2	Failure to monitor (Sodium)

H. Primary Chemical Compliance	OK	Consult regulations cited above. All water systems must meet the MCLs for primary chemicals based on regulation.
	4	Failure to comply with MCL (any parameter)
I. Lead and Copper Monitoring	OK	Consult 0400-45-01-.33. All Community and Non Transient Non Community water systems must monitor for lead and copper based on population. If an exceedance of the lead and copper action level occurs or a system serves a population greater than 50,000 individuals, water quality parameter monitoring must be conducted. Subsequent to testing, an Optimal Corrosion Control Treatment Recommendation must be submitted to the Division.
	3	Failure to monitor
	3	Failure to conduct water quality parameters monitoring (>50,000 population).
	2	Failure to submit Optimal Corrosion Control Treatment Recommendation (OCCTR).
J. Lead and Copper Action Level Compliance	OK	Consult 0400-45-01-.33. All CWSs and NTNCWSs must meet lead and copper action levels. If testing shows exceedances of the action level for either parameter corrective measures must be taken to insure the quality of water such as optimal corrosion control plan and water quality parameter testing.
	5	Exceedance of the 90th percentile for Lead.
	3	Exceedance of the 90th percentile for Copper.
	3	Failure to maintain Optimal Corrosion Control Treatment as required.
K. Disinfection/ DBPs and Precursors Monitoring	OK	Consult 0400-45-01-.36, .37, .38. Community Water Systems and Non Transient Non Community Water Systems must monitor for disinfection by products and maximum residual disinfection levels for disinfectants. Systems must also monitor for disinfection by product precursors.
	3	Failure to monitor disinfection by-products as required.
	3	Failure to perform disinfectant monitoring as required.
	2	Failure to monitor TOC as required.
	3	Failure to monitor Bromate/Bromide or Chlorite as required.
L. Disinfection/ DBPs and Precursors Compliance	OK	Consult 0400-45-01-.06, .36. Community and Non Transient Non Community Water Systems must meet MCLs for disinfection by products and MRDLs for disinfectants. Systems must meet minimum disinfectant levels in water entering the distribution system and in distribution system samples. Systems must also meet removal requirements for disinfection by product precursors.
*	30	Acute violation of the MRDL for Chlorine Dioxide.
	5	Non-acute violation of the MRDL for Chlorine Dioxide.
	4	Failure to meet MRDL for disinfectants other than Chlorine Dioxide.
	4	Failure to meet MCL for disinfection by-products.
	4	Failure to meet MCL for bromate or chlorite.
	2	Failure to meet TOC removal requirements.
	4	Disinfectant residuals (chlorine and chloramines) below 0.2 mg/L in more than 5% of samples.
	4	Disinfectant residuals (chlorine and chloramines) for water entering the distribution system below 0.2 mg/L for more than 4 hours.

M. Secondary Chemicals	OK	Consult 0400-45-01-.12. All CWSs and non community water systems as deemed necessary must conduct secondary chemicals monitoring.
	2	Failure to monitor for secondary chemicals as required.
N. Secondary Chemical Compliance	OK	Consult 0400-45-01-.12. All water systems required to monitor secondary chemicals must meet MCLs for secondary standards.
	3	Failure to meet MCL for secondary standards.
O. Crypto-sporidium Monitoring	OK	Consult 0400-45-01-.39. All subpart H systems must conduct an initial and a second round of source water monitoring for each plant that treats a surface water of GWUDI source. Systems are also required to submit a sampling schedule that specifies the calendar dates when the system will collect each required sample. Systems must respond to significant deficiencies identified during the sanitary survey process.
	narrative	Failure to submit sampling schedule(s). Failure to report source water monitoring.
	narrative	Failure to conduct monitoring as required or sample from appropriate locations.
	narrative	Failure to meet treatment technique requirements (filtered and unfiltered systems). Failure to respond to significant deficiencies as required.
	narrative	Failure to determine bin classification.
6. Finished Water Storage	**(25)**	**Distribution**
A. Adequate Storage	OK	Consult 0400-45-01-.17. All community water systems serving 50 or more service connections must have 24 hours of distribution storage based on average daily demand for the past twelve months. Such storage must be located to meet instantaneous demand in all areas at any time.
2.25 mg	4	Failure to meet 24 hour storage requirements based on average daily demand.
	2	Failure to locate water storage in a manner to meet instantaneous demand.
B. Inspection and Maintenance of Reservoirs and Tanks	[redacted]	Consult 0400-45-01-.17. All water storage tanks and reservoirs must be professionally inspected every 5 years. All tanks and reservoirs appurtenant works must be properly maintained and secured. All vents and overflows must be screened and protected. There should be no evidence of unsanitary or unfit conditions. Professional tank inspection reports must address all aspects of the tank.
*	10	Evidence of unsanitary conditions (presence or evidence of animals, birds, insects, debris, or other foreign substances, openings, discoloration, odor or other unfit condition).
	7	Failure to have professional tank inspections every five years.
	1	Failure to provide adequate security.
	1	Failure to provide proper screens, flaps, locks, etc. or other protective measures or perform maintenance activities. The High school tank is showing paint pops. The rust should be removed and the tank painted
7. Pumps, Pump Facilities and Controls	**(18)**	**Treatment and/or Distribution**

A. Pump Facilities	OK	Consult 0400-45-01-.17. All CWSs serving 50 or more service connections must have duplicate pumps for raw water, finished water and distribution pumping stations unless otherwise approved by the Division. Pumps must be adequately sized to meet plant and distribution system demands and must be secured.
	4	Failure to provide duplicate pumps (raw water, finished water and pump stations).
	3	Duplicate or back up pumps are of insufficient size.
	3	Pumping capacity is inadequate to meet plant capacity after removing largest pump.
	2	Lack of low suction cut off devices.
	1	Failure to provide adequate security.
B. Maintenance of Pumping Equipment	OK	Consult 0400-45-01-.17. All pumps, pumping equipment and pumping facilities must be maintained.
	3	Inoperable pump(s) has not been repaired or scheduled for repair.
	1	Pump(s) is/are leaking or vibrating excessively.
	1	Pump facilities require maintenance attention (drains, de-humidifiers, sump pumps, etc.).
8. Distribution and Cross Connections	**(86)**	**Distribution**
A. Notification, Inspection and Disinfection of New or Existing Facilities	OK	Consult 0400-45-01-.17(8). All new or existing facilities must be disinfected, flushed and have bacteriological samples collected prior to being placed into service following construction, inspection, maintenance or repair. Sanitary practices must be followed and documented to include disinfection procedures. Bacteriological sample(s) collected for maintenance/repair of existing facilities must be collected to represent water contained in the repaired line, tank, or filter. Disinfectant residual must be monitored on new taps where the main line had to be uncovered to make the tap. A Certified Laboratory must be used for bacteriological sampling analysis. Disinfectants used must be NSF approved.
	5	Failure to provide adequate disinfection, flushing or bacteriological sampling for main line repairs or new main lines.
	5	Failure to collect bacteriological samples representative of a repair area or prior to the main line being placed back into service.
	3	Failure to flush and monitor disinfectant residual on new service taps where the main line had to be uncovered to make the tap.
	5	Failure to properly flush, disinfect and/or collect bacteriological samples for a tank(s) or a reservoir(s) after entry, dewatering, cleaning, inspection, repair or other compromising of the integrity of a tank or reservoir has been made and prior to being placed back into service.
	4	Failure to utilize a certified laboratory for bacteriological samples collected to indicate effectiveness of disinfection practices.
	3	Failure to make and/or maintain records documenting procedures utilized, flushing activities, disinfection practices and/or bacteriological sampling for new facilities and/or repair activities.

B. Flushing Program / Blow Offs	OK	Consult 0400-45-01-.17(10)(23). All CWSs with 50 or more connections must establish and maintain an adequate flushing program to ensure that dead end and low use mains are flushed, drinking water standards are met, sediment and air is removed and disinfectant residual is maintained. All dead end mains and all low points in mains must be equipped with a blow-off or other suitable flushing mechanism capable of producing velocities adequate to flush the main.
	4	Failure to establish, initiate and/or maintain an adequate flushing program.
	3	Failure to maintain an active flushing program.
	4	Lack of flushing causes water quality problems, failure to remove air and sediment, reduced residual disinfectant, taste and odor issues, red water, etc.
	3	Failure to equip all dead end mains and low points in water mains with a blow-off or other suitable flushing mechanism.
C. Fire Hydrants	OK	Consult 0400-45-01-.17(18). Fire hydrants must not be installed on water mains that are less than 6 inches in diameter or that cannot produce 500 gpm at 20 psi unless the tops are painted red. Existing hydrants that are unable to deliver 500 gpm at 20 psi (Class C) must have their tops painted red by January 1, 2008. Beginning January 1, 2008, water systems must provide certified mail notification, to each fire department that may use the hydrants, of color coding and use restrictions pursuant to regulation.
	narrative	Failure to properly color code Class C fire hydrants.
	narrative	Failure to provide notification to each fire department that may have reason to use the hydrants of Class C hydrants and corresponding color coding and use restrictions as required.
D. Adequate Pressure	OK	Consult 0400-45-01-.17(9), .05(9). All CWSs must be operated and maintained to provide a minimum positive pressure of 20 psi throughout the distribution system.
	5	Failure to maintain 20 psi positive water pressure to all customers and no action has been initiated to correct the problem.
E. Map of Distribution System	OK	Consult 0400-45-01-.17(15). All CWSs with 50 or more connections must have and maintain up-to-date maps of the distribution systems documenting locations and sizes of mains, valves, blow-offs or flush hydrants, air release valves and fire hydrants. Overall system distribution map(s) must be submitted to the DWS every 5 years.
	3	Failure to have a current map on file showing lines, line sizes, valves, blow-offs, hydrants, etc.
	narrative	Failure to maintain up to date maps.
	narrative	Failure to submit a generalized map of lines and line sizes to the DWS as required.
F. Cross Connection Policy or Ordinance	OK	Consult T.C.A. 68-221-711(6), 0400-45-01-.17(6). The installation, allowing the installation, or maintenance of any cross connection, auxiliary intake or bypass is prohibited unless the source and quality of water, method of connection, use and operation is approved by the Department. All CWSs must adopt and have a cross connection ordinance or policy to prohibit the above and submit an executed copy to the Department for approval.

	4	Failure to adopt a Cross Connection Policy or Ordinance or submit such Policy or Ordinance to the DWS for approval.
G. Working Cross Connection Program	OK	Consult 0400-45-01-.17(6). All CWSs must establish and maintain an ongoing program for the detection and elimination of hazards associated with cross connections.
	9	Installing or allowing the installation or maintenance of any cross connection, auxiliary intake or bypass unless approved by the Department.
	3	Failure to develop and submit a written plan for cross connection control.
	5	Failure to establish an ongoing program for the detection and elimination of hazards associated with cross connections.
	3	Failure to identify hazards in the system.
	5	Failure to conduct annual testing of all known backflow prevention assemblies.
	4	Failure to conduct surveys and/or resurveys of new and existing customers.
	3	Failure to conduct initial testing of installed assemblies or failure to conduct follow-up testing on failed assemblies.
	3	Assemblies tested by an individual that has not demonstrated competency for testing assemblies.

Unaccounted Water Loss	OK	Although not required by rule, the DWS recommends that public water systems initiate efforts to determine unaccounted water use or water loss.
	narrative	Annual unaccounted water use or loss in excess of levels established by the Water Finance Board should be investigated by the water provider.
Total Treatment Points	488	To be used for treatment systems or wholesalers of water that do not have distribution facilities.
Total Distribution Points	421	To be used for consecutive systems comprised of distribution facilities only
Total Treatment and Distribution Points	599	To be used for systems comprised of both treatment and distribution facilities.
Survey Rating		
	95 to 100	Approved 99%
	90 to 94	Provisionally Approved
	0 to 89	Unsatisfactory

599 $\frac{595}{597} = 99\%$